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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,391	10/30/2003	Robert M. Schurter	010121-9944	7470

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EXAMINER

FRANTZ, JESSICA L

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/697,391	SCHURTER ET AL.	
	Examiner	Art Unit	
	Jessica L. Frantz	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☒ Claim(s) 36 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/19/2004, and 10/30/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/8/06, 3/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statements (IDS) submitted on 8/8/2006 and 3/26/2004 are acknowledged. The references listed therein have been considered.

Claim Objections

2. Claims 36 and 39 are objected to because of the following informalities:
 - Claim 36 lacks antecedent basis for the limitation "the projection."
 - Claim 39 lacks antecedent basis for the limitation "the tank."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "wherein the seal is an elastic member that separates the tank" is unclear. Each embodiment was described as having both a seal and an elastic member where the elastic member is the apparatus that separates the tank into two portions. Therefore, for the purpose of this office action, this claim has been taken to mean "wherein the apparatus of claim 22 further comprises an elastic member that separates..."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 9-36, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph (US 5,320,495) in view of Schonwald et al. (4,247,260) and further in view of Peterson, Jr. (3,797,317). Ralph discloses a water storage apparatus for selectively storing and releasing water delivered from a well (12) via a water pump (14), the apparatus comprising: a pressure vessel (16) having an opening (30) and an interior volume; an elastic member (28) inside the pressure vessel and separating the interior volume into a water storing volume (portion of pressure vessel outside of elastic member 28, see figure 1) and an air storing volume (portion of pressure vessel inside of elastic member 28, see figure 1), the water storing volume communicating with the water pump and is filled with water supplied by the pump, the air storing volume containing a fixed amount of air, the volume of the air storing volume decreasing and the pressure increasing in response to water being pumped into the water storing volume, the volume air storing volume increasing and the pressure decreasing in response to a decrease in the amount of water in the water storing volume; a conduit (30) in the pressure vessel opening and defining an air passage in communication with

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the air storing volume; an air pressure switch (20) in communication with the air passage and adapted to activate the pump in response to the air pressure in the air storing volume dropping below a first limit and deactivating the pump in response to air pressure rising above a second limit (See Column 4, lines 22-43). Also, the invention of Ralph comprises an air pressure gauge (44) coupled to the conduit and in communication with the air passage, the air pressure gauge sensing air pressure in the air passage and providing a visual indication of pressure. However, Ralph fails to disclose a piercing member contiguous with the conduit and extending into the air storing volume to pierce the elastic member in the event that the elastic member contacts the piercing member due to the air storing volume shrinking below a normal operating range of volumes. He also fails to teach a resilient seal and a spud. Peterson, Jr. teaches a piercing member (or projection) (22) capable of being contiguous with the conduit and extending into the air storing volume which is also capable of piercing the elastic member in the event that the elastic member contacts the piercing member due to the air storing volume shrinking below a normal operating range of volumes for the purpose of sensing pressure. (Abstract). Peterson, Jr. further discloses that this piercing member allows for an air passage to extend through it to allow the pressure gauge to provide a reading (Column 2, lines 41-44) and the piercing member has an elongated needle shaped body (Column 3, line 8 and Figure 1) extending away from the conduit with which it is integral and into the air containing volume. Furthermore, Peterson, Jr. discloses providing resilient seals (14, 16) across the opening (44) and containing the fixed amount of air in the air storing volume even in

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the absence of the conduit, wherein the piercing member pierces the seal as the conduit is coupled to the opening (Column 3, lines 3-16) for the purpose of insuring against leakage. Peterson, Jr. also discloses a spud (10) around the opening where the conduit having a threaded portion (30 of Ralph, see figure 3) adapted to thread into the spud, the piercing member piercing the seal as the conduit is threaded into the spud. Also, Peterson, Jr. discloses the seal is resilient to allow the conduit and piercing member to be removed from the opening without sustaining substantial pressure losses in the air storing volume. (Column 3, lines 55-63 and Column 4, lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the invention of Ralph with the piercing member, spud, and seal of Peterson, Jr. for the purpose of allowing the sensing of pressure within the pressure vessel, to allow the conduit to be effectively secured in place, and to avoid unwanted flow leakage. However, the combined invention of Ralph and Peterson Jr. fail to teach an elastic member of the same construction as the claimed invention. Schonwald et al. teaches an elastic member, which is a diaphragm, (10) with the same structural capacities as that of the claimed invention which is provided for the purpose of separating the vessel into an air storing volume and a water storing volume (Column 3, lines 8-16). Furthermore, in the event of an over pressure in the air storing portion of the vessel (11), the elastic member of Schonwald et al. is capable of being pierced by the combined invention of Ralph and Peterson, Jr. for the purpose of relieving such an overpressure. (Column 4, lines 2-6). Also, Schonwald et al. further discloses a valve (16) capable of pressurizing the tank (Column 3, lines 10-13) at a location other than the

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opening for the purpose of reducing congestion around the opening due to all the apparatuses already attached in its vicinity including the pressure gauge and pressure switch. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the combined invention of Ralph and Peterson with the elastic member and valve of Schonwald et al. for the purpose of separating the vessel into an air storing volume and a water storing volume (Column 3, lines 8-16) and allowing for reduced congestion in the vicinity of the opening.

In reference to claims 39-43 and 45, while the method of manufacturing the apparatus including forming the pressure vessel, installing a seal, pressurizing the tank, packaging the apparatus, removing the packaging, attaching the pressure switch, piercing the seal with the piercing member, and pressurizing through a valve located in a different location other than the opening is not explicitly stated, it is obvious given the combined apparatus of Ralph, Peterson, Jr. and Schonwald et al. It is obvious that in manufacturing a water storage tank, one first forms a pressure vessel having an opening and as disclosed in the above combined references including an elastic member located inside the pressure vessel to separate the interior volume into a water storing volume and an air storing volume; and furthermore, installing a seal over the opening to prevent leakage, the seal capable of sealing the entire opening and adapted to be punctured by a pressure switch mounting assembly. Also, it is inherent that every tank will be pressurized to at least atmospheric pressure. Therefore, the tank is always pressurized. Furthermore, it is obvious to package an apparatus to avoid damage during the shipment process and as mentioned earlier, this packaging

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will always take place when the tank is pressurized because the tank will at least be pressurized to atmospheric pressure. Furthermore, it is obvious to remove the packaging after having been shipped in order to use the apparatus and to complete the assembly process by attaching the pressure switch. Also, it is obvious to have the piercing member pierce the seal in order to penetrate the pressure vessel and be able to sense pressure and this happens, given the structure of the above reference, during the installation of the pressure switch. Also, it is obvious to seal the tank before pressurizing in order to prevent leakage. Furthermore, Schonwald et al. further discloses a valve (16) capable of pressurizing the tank (Column 3, lines 10-13) and it is obvious to provide for this feature as the opening may quickly become congested with all the apparatus already attached in its vicinity including the pressure gauge and pressure switch. Therefore, given the combined apparatus of Ralph, Peterson, Jr. and Schonwald et al. it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of manufacture as cited in the claims for the purpose of more efficiently manufacturing the apparatus.

7. Claims 8, 37-38, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference applied directly above in view of MacGregor (2,476,748). The references as applied directly above teach the invention substantially as claimed but fail to teach that the seal is frangible, that the seal is connected to the interior of the tank, and further that it is adhered to the interior of the tank. MacGregor teaches the seal (28) is a frangible seal for the purpose of allowing it to easily rupture (Column 1, lines 18-23, and Column 3, lines 72-73) and is located in the interior of the

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tank (11, 17) for the purpose of providing a fluid seal across the opening thereby avoiding leakage through the use of adhering means (26) which are employed to position and secure the seal (Column 3, lines 8-12). Therefore, it would have been obvious, to one of ordinary skill in the art at the time of the invention, to have provided the references as applied above with the type of seal and seal location of MacGregor for the purpose of allowing the seal to easily rupture (Column 1, lines 18-23, and Column 3, lines 72-73) and for the purpose of providing a fluid seal across the opening thereby avoiding leakage and also the adhering means which are employed to position and secure the seal. (Column 3, lines 8-12).

8. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over as applied above in view of Hansen (3,809,496). The combined apparatus of the reference applied above teach the invention substantially as claimed but fail to teach that one should paint the pressurized tank during the manufacture process. Hansen teaches painting a tank to make it more attractive. (Column 4, lines 55-56). Therefore, it would have been obvious to one of ordinary skill to have painted the tank of the combined invention of Ralph, Schonwald and Peterson, Jr. to make the apparatus more attractive. (Column 4, lines 55-56).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

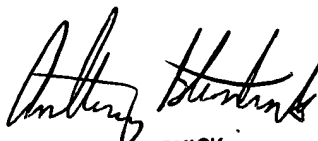
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (571)272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JF

JF


ANTHONY D. STASHICK
PRIMARY EXAMINER